(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

BERICHTIGTE FASSUNG

(19) Weltorganisation für geistiges Eigentum Internationales Büro





(43) Internationales Veröffentlichungsdatum 15. Juli 2004 (15.07.2004)

PCT

(10) Internationale Veröffentlichungsnummer WO 2004/058855 A1

(51) Internationale Patentklassifikation7:

C08G 65/20

(21) Internationales Aktenzeichen: PCT/EP2003/014790

(22) Internationales Anmeldedatum:

23. Dezember 2003 (23.12.2003)

(25) Einreichungssprache:

Deutsch

(26) Veröffentlichungssprache:

Deutsch

- (30) Angaben zur Priorität: 102 61 484.9 23. Dezember 2002 (23.12.2002) DE
- (71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme von US): BASF AKTIENGESELLSCHAFT [DE/DE]; 67056 Ludwigshafen (DE).
- (72) Erfinder; und
- (75) Erfinder/Anmelder (nur für US): SCHLITTER, Stephan [DE/DE]; Mainstr. 2, 67117 Limburgerhof (DE). HAUBNER, Martin [DE/DE]; Jenaer Str. 10, 69124 Eppelheim (DE). ZEHNER, Peter [DE/DE]; Erich-Kästner-Str. 15, 67071 Ludwigshafen (DE). HESSE, Michael [DE/DE]; Weinbiestrasse 10, 67549 Worms (DE). WECK, Alexander [DE/DE]; Buttstädter Strasse 9, 67251 Freinsheim (DE). PINKOS, Rolf [DE/DE]; Birkental 3a, 67098 Bad Dürkheim (DE). GRASSLER, Thomas [DE/DE]; Landauer Str. 8, 67117 Limburgerhof (DE).
- (74) Anwalt: ISENBRUCK, Günter; Isenbruck, Bösl, Hörschler, Wichmann, Huhn, Theodor-Heuss-Anlage 12, 68165 Mannheim (DE).

- (81) Bestimmungsstaaten (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Bestimmungsstaaten (regional): ARIPO Patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), eurasisches Patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), europäisches Patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI Patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Veröffentlicht:

- mit internationalem Recherchenbericht
- (48) Datum der Veröffentlichung dieser berichtigten Fassung: 14. Oktober 2004
- (15) Informationen zur Berichtigung: siehe PCT Gazette Nr. 42/2004 vom 14. Oktober 2004, Section II

Zur Erklärung der Zweibuchstaben-Codes und der anderen Abkürzungen wird auf die Erklärungen ("Guidance Notes on Codes and Abbreviations") am Anfang jeder regulären Ausgabe der PCT-Gazette verwiesen.

- (54) Title: METHOD FOR THE POLYMERIZATION OF CYCLIC ETHERS
- (54) Bezeichnung: VERFAHREN ZUR POLYMERISATION CYCLISCHER ETHER
- (57) Abstract: The invention relates to a method for producing polytetrahydrofuran, polytetrahydrofuran copolymer, polytetrahydrofuran diester, or polytetrahydrofuran monoester by polymerizing tetrahydrofuran in the presence of at least one telogen and/or comonomer and an acid heterogeneous catalyst based on activated layered silicates or mixed metal oxides in a fluidized bed.
- (57) Zusammenfassung: Die vorliegende Erfindung betrifft ein Verfahren zur Herstellung von Polytetrahydrofuran, Polytetrahydrofuran-Copolymer, -Diester oder -Monoester durch Polymerisation von Tetrahydrofuran in Gegenwart mindestens eines Telogens und/oder Comonomers und eines sauren heterogenen Katalysators auf Basis aktivierter Schichtsilikate oder gemischter Metalloxide in einem Fliessbett.



	Application N
PCT/EP	03/14790

A. CLASSI IPC 7	FICATION OF SUBJECT MATTER C08G65/20			
According to	o International Patent Classification (IPC) or to both national clas	silication and IPC		
	SEARCHED		<u> </u>	
Minimum do IPC 7	ocumentation searched (classification system followed by classif ${\tt C08G}$	cation symbols)	·	
Documenta	tion searched other than minimum documentation to the extent th	al such documents are included in the fields s	earched	
Electronic d	lata base consulted during the international search (name of date	base and, where practical, search terms used	1)	
EPO-In	ternal, WPI Data, PAJ			
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT			
Category *	Citation of document, with indication, where appropriate, of the	e relevant passages	Relevant to claim No.	
P,X	WO 03/002631 A (FISCHER ROLF-H/;SCHLITTER STEPHAN (DE); SIGWAF () 9 January 2003 (2003-01-09) page 5, line 1 - line 5; examp	1-14		
Υ	US 6 362 312 B1 (BECKER RAINER 26 March 2002 (2002-03-26) claims; examples	ET AL)	1-14	
Y	US 5 136 106 A (KING STEPHEN W 4 August 1992 (1992-08-04) column 9, line 1 - line 15)	1-14	
		•		
Furt	ther documents are listed in the continuation of box C.	Patent family members are listed	in annex.	
"A" docum	stegories of cited documents : ent defining the general state of the art which is not dered to be of particular relevance	"T" later document published after the int or priority date and not in conflict with cited to understand the principle or th invention	the application but	
E earlier document but published on or after the International filing date *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another		"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention		
citatio "O" docum other	n or other special reason (as specified) ent relarring to an oral disclosure, use, exhibition or means ent published prior to the international filing date but	cannot be considered to involve an in document is combined with one or m ments, such combination being obvic in the art.	ventive step when the ore other such docu-	
later t	han the priority date claimed	*& document member of the same patent family Date of mailing of the international search report		
	actual completion of the international search	04/05/2004	эн төрөт	
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2		Authorized officer		
	NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Fax: (+31-70) 340-3016	Schmitz, V		

BEST AVAILABLE COPY

			PCT/EP	03/14790
Patent document cited in search report	Publication date	· 	Patent family member(s)	Publication date
WO 03002631 A	09-01-2003	DE WO EP	10130782 A1 03002631 A1 1404741 A1	02-01-2003 09-01-2003 07-04-2004
US 6362312 B1	26-03-2002	DE AU CN DE WO EP ES JP TW	19801462 A1 2617799 A 1102159 B 59905640 D1 9936459 A1 1047721 A1 2200500 T3 2002509169 T 467919 B	22-07-1999 02-08-1999 26-02-2003 26-06-2003 22-07-1999 02-11-2000 01-03-2004 26-03-2002 11-12-2001
US 5136106 A	04-08-1992	US US US	5025094 A 4727199 A 4873017 A	18-06-1991 23-02-1988 10-10-1989
• • • • • • • • • • • • • • • • • • •				
			•	
	٠.			
				•
				, 3m2